Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC. DEC. 2, 1946

Martin's Transport Entry: *The Glenn L. Martin Co.'s Model 202 photographed on its first flight over Baltimore, home of the builder. Possibly the most widely-bought postwar airliner, the 202 has been under construction for more than a year. This first plane is backed up by eight others well advanced toward assembly in the Martin plant. Story on page 8.*

Washington Observer

STUDY TARIFF CUTS FOR AIRCRAFT—Plane manufacturers have been requested to state their views on possible reductions of tariffs on imported aircraft and aircraft products. Present rate is 30 percent ad valorem, based on wholesale value in the originating country. Under the reciprocal trade agreement law, this could be reduced by not more than 50 percent, or to 15 percent. It is known that Canada, which seeks to build up her commercial aviation, will welcome a cut in our tariff to export into this country a few aircraft types which our industry does not supply. She would also undouhtedly reduce her own rates, now 20 percent on aircraft and 17½ on engines. Some U. S manufacturers feel our industry would gain more than Canada's. But the subject has been laid before the entire U. S. industry, because under the reciprocal trade agreement most other nations would receive the same new rate. It would then be up to government negotiators to wangle similar reductions from other aircraft manufacturing countries such as England and France

* * *

TRANSPORTATION LEGISLATION — Senator Tom Stewart, Tenn. Democrat, may jump the gun on House Interstate and Foreign Commerce Committee with legislation rewriting national transportation policy in the new Congress. Stewart was the instigator of the Senate Small Business Committee's study which proposed sweeping and basic changes in transportation law. He is a high-ranking member of the Interstate Commerce Committee, and may claim a post on the Senate's new Interstate and Foreign Commerce Committee.

* * *

SLIM CHANCE FOR RESEARCH FOUNDATION —The Republicans' economy program blacks our chances for enactment of the Kilgore-Magnuson national research foundation hill, seasoned observers hold. They think it incredible that the economy Congress will authorize a new government agency to cost from thirty to 100 million dollars a year.

* * *

WAA PARADE—The parade of administrators of War Assets Administration is due to be resumed shortly, according to insiders, with Robert M. Littlejohn stepping out. Mentioned as a possible successor is Wayne Chatfield Taylor, former Undersecretary of Commerce and former Export-Import Bank president. Another possibility is James Mollison, former head of WAA'S aircraft division and now acting vice-administrator in charge of Washington operations. Mollison is widely considered to have done an outstanding job in aircraft disposal, his division being cited by several congressional committees as a model for other WAA groups Littlejohn, a former Major General, is depicted as weary of continuous congressional quizzing and is not too well-liked by his WAA associates who contend he has tried to run WAA as an Army post.

* * *

AN UNNECESSARY RAP FROM HAP — Airline and ATA officials contend that General "Hap" Arnold's lusty slap at them during his address at the Aircraft Industries Association luncheon during the Cleveland Air Show were unnecessary additional punishment. Arnold said the air transportation industry's method of handling air traffic in had weather, and its lack of instrument landing equipment is "archaic as the covered wagon." Administrator T. P. Wright was present, but there were few airline representatives at the luncheon. The statement was widely publicized hy the press. Arnold came east from his California farm where, he confided, he is learning much about bulls, and husbandry in general. He was presented with a silver tray, inscribed by all aircraft company presidents.

* * *

SURPLUS PLANE STOCKS DEPLETED—WAA officials expect their salable aircraft stocks to be exhausted in March, unless the services turn over further supplies, not now expected. Huge stores of aircraft components will remain, however, to dominate the aviation picture at WAA.

* * *

ECONOMY FOR AIR GUARD AND RESERVE—Army Air Forces brass hats are in continuous sessions attempting to meet orders from the War Department to slash their budget estimates for fiscal 1948, beginning July 1. The AAF totals were ordered reduced even before the War Department saw them. Present indications are that the National Air Guard and Reserve programs will be slashed, hut that research will remain untouched.

* * *

UNDERGROUND PLANTS—Wright Field's industrial planning section is studying a report on German underground factories. It is understood that feasibility of similar installations in this country is being discussed. The report will be made public shortly. Meanwhile, industrial planning officials are encouraged by industry reaction to their proposals and notice an increasing tendency on the part of engineers in design aircraft for mass production as well as for performance —one of the cardinal principles of the industrial planners.

AVIATION NEWS

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Volume 6, No. 23

News Digest

DOMESTIC

Capt. J. E. Sullivan won the AAF jet race held in conjunction with the National Aircraft Show at Cleveland. Sullivan averaged 534.6 mph. for the 820-mile course in a Lockheed P-80.

Air Express shipments through LaGuardia Field soared to an all time high in October. A total of 138,818 shipments were handled, a 77 percent increase over last October.

New Jersey is planning a state $14,000,000-airport program to build 21 new fields capable of handling 11,000 planes by 1950. Program also includes building dual runways at Newark to ease the New York area air traffic congestion.

Capt. John S. Delano, Washington, D. C., was re-elected president of the American Pilots Association at its convention at Galveston, Texas. Edgar Anderson, of New York, was elected vice-president and H. L. Hargrove, Mobile, Ala., was named secretary-treasurer.

FINANCIAL

Breeze Corps. Inc. declared a dividend of 40 cents a share on common stock payable Dec. 10 to stockholders of record Nov. 30.

TWA reported a net loss of $3,235,591 for the third quarter of 1946 resulting principally from the temporary grounding of its Constellations by the CAB last July. Operating expenses for the quarter were $21,890,634 or an increase of 18 percent over the previous quarter. Loss for the first nine months after tax credits was $4,846,450.

FOREIGN

C. R. Patterson, general manager of the National Aeronautical Association of Canada, died at Toronto after a short illness.

Swiss Air Lines claimed a non-stop commercial record flight of 4,000 miles in 16 hours between LaGuardia Field and Geneva, Switzerland. The plane, a new DC-4, carried a payload of five tons of spare parts.

India-U.S. air service will begin next January with TWA flying from New York to Bombay and Pan American flying from New York to Calcutta with possible stops at Karachi and New Delhi. Both companies plan tri-weekly services.

Latest addition to the rapidly growing stable of AAF supersonic planes is the XS-4 to be built by Northrop Aircraft, Inc., at its Crenshaw plant. Northrop is also nearing completion of the XB-49, a jet-propelled version of the Flying Wing (XB-35).

The Dutch are developing a 500-mph. jet-powered airliner for trans-Atlantic service. It will be built by Fokker and powered by two Rolls-Royce Nene engines built into the underside of the fuselage. Designed to carry 17 passengers, it will have a pressurized cabin and is expected to fly within three years.

AAF and Navy accepted 190 aircraft during October with a total airframe weight of 1,256,300 lb. AAF accepted the following planes: Lockheed P-80A, 81, FP80A, 25, Northrop F-15A, 5, Fairchild C-82A, 81, Sikorsky R5D helicopter, 7. Navy accepted, Martin PBM-5E, 2, Douglas BT2D-1, 3, Grumman F7F-4N, 5, Chance Vought F4U-4, 19, Grumman F8F-1, 31, Curtiss SC-2, 1.

AAF will contribute a Mitchell (B-25) bomber from its Weather Reconnaissance Squadron at Morrison Field, Fla., to aid General Electric's research on the artificial control of weather. GE's recent demonstration of creating an artificial snowstorm by sowing dry ice pellets in super-cooled clouds is being studied as a possible method of fog dispersal.

As part of the AAF's industrial preparedness program the Air Materiel Command has selected 20,000 surplus machine tools for "pickling" and storage. AAF experts estimate that this machine tool reserve would provide about two-thirds of the aircraft industry's requirements for the first year of the next war.

Beech Aircraft has received a Navy contract to overhaul more than 100 SNB-1 twin-engine Beechcraft trainers.

RAF will scrap all reciprocating-engined fighters in its operational squadrons as soon as sufficient jet-powered fighters are available for replacements.

Douglas Skymasters will be used by South African Airways on its London-Johannesburg run because of delivery delays on the Avro Tudor II's originally scheduled for this service.

A civil air agreement recently concluded between France and Portugal specifies that all French planes flying over Portugal must land at Lisbon unless prior permission is obtained to by-pass the city. Portuguese policy is to compel all foreign aircraft flying over the country to make a stop at Lisbon.

Consolidated-Vultee's initial AAF order for the L-13 all-metal liaison plane will be for approximately 150.

United Aircraft Corp. is now spending ten times as much on research and development as it was before the war.

One unannounced reason behind the factory remanufactured engine plan of Continental Motors Corp. is to solidify Continental's position against the day when some lightplane manufacturers may become big enough to think about producing their own engines. That is a development that occurred in the automotive field years ago and Continental still remembers its tremendous sales decline.

Canada's Department of Transport has installed the SCS-51 instrument landing system at Montreal, Ottawa and Winnipeg and plans further installations for Toronto, London (Ont.), Calgary and Regina.

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CAB Plan Would Give Free Rein To Uncertificated Cargo Lines

Revision offered in nonscheduled exemption controversy foreshadows increased competition in 1947; passenger carriers would remain under tight regulation.

By CHARLES L. ADAMS

An unprecedented free-for-all in the air cargo business during 1947 is foreshadowed by a CAB proposal to set airfreighters apart from other noncertificated carriers and permit their temporary operation on a scheduled common carrier basis.

The Board's latest plan for revising the controversial nonscheduled exemption (Section 292.1 of the economic regulations) would enable airfreight operators with route applications pending to compete for cargo on equal footing with the airlines until 60 days after CAB grants or denies them certification.

▸ **Industry Surprised**—Freight forwarders and consolidators would be permitted to operate in conjunction with both certificated and noncertificated air carriers until 60 days after the Board's decision in the consolidated freight forwarder case (Docket 681 et al.).

CAB's proposal, coming while the Board is bearing down on nonscheduled passenger and passenger-cargo operators, apparently took the entire industry by surprise. Airline officials indicated they would strongly oppose portions of the suggested revision dealing with cargo services.

▸ **Airfreighters Optimistic**—Several contract airfreighters believe that the Board, in recognizing a distinction between passenger and nonpassenger operations, had taken a long step toward preventing a cargo monopoly by the presently-certificated airlines. A representative of an all-cargo line declared the proposed revision is the best indication to date that CAB will certificate one or more applicants in the airfreight case (Docket 810 et al.), on which hearings are now underway before the Board.

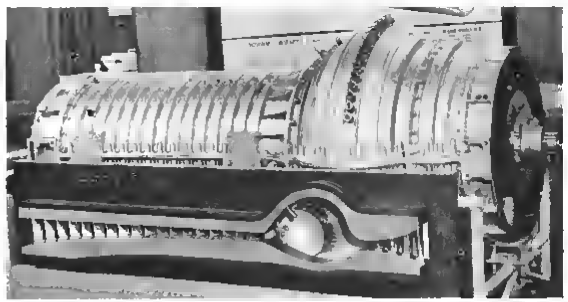
The Board's action on Section 292.1 in no way indicates a softening of policy toward non-certificated operators who carry passengers only or passengers and cargo. Eleven of these companies (together with one intrastate line) have been cited for allegedly conducting scheduled common carrier service in violation of the Civil Aeronautics Act. CAB is continuing to probe the activities of several others.

▸ **Suggestion Tentative**—In its latest form, the suggested nonscheduled exemption reflects the tentative decision of the Board after thorough consideration of all comments submitted on the revision proposed last May. The new draft does not represent the unanimous conclusions of all five CAB members. Therefore it is especially susceptible to further change before adoption.

Written comments and briefs in support of or opposition to the proposal will be filed with CAB by susceptible to further change beheld beginning Jan. 6.

▸ **Operators Typed**—Under the revised exemption, operators would be divided into three categories: "noncertificated irregular air carriers" (nonscheduled passenger cargo lines), "noncertificated air cargo carriers" (airfreighters), and "noncertificated indirect air cargo carriers" (freight forwarders and consolidators). Companies operating in any of these categories pursuant to Section 292.1 would be required to obtain a "letter of temporary authority" from CAB.

Regulations would not prevent an operator from holding one letter of temporary authority as a noncertificated irregular air carrier and another for operations as a noncertificated air cargo carrier. The letters would be subject to immediate suspension if, in the opinion of the Board, circumstances require such action in the public interest.



NATION'S FIRST PROP-JET: *Turbodyne I, first prop-jet engine tested in this country, was shown at the National Aircraft Show by Northrop Aircraft, whose subsidiary, Northrup-Hendy, developed it under a military contract. Work started on the 2,400 hp engine in 1941 and it was first run in 1944. One of the most closely-guarded secrets of the war, details on it have never been announced. The show at Cleveland was its first public exhibition. (Martin & Kelman photo)*

Names Restricted

CAB's suggested revision of the nonscheduled exemption contains a section designed to eliminate public misunderstanding concerning the status of noncertificated and certificated air carriers.

Noncertificated irregular air carriers (nonscheduled passenger cargo lines) would not be permitted to use "way" or "line" alone or in combination with any other term in their company names. Thus "X" company, a noncertificated irregular air carrier, could not call itself "X" Airways, "X" Skyways, "X" Airlines, "X" Skylines, etc.

▶ **Regularity, Yardstick** — Noncertificated irregular air carriers would be exempt from certification only if they do not offer regular or reasonably regular air transportation between designated points. Yardsticks used to determine "regularity" would be those applied in CAB's Page and Trans-Marine decisions and its opinion in the investigation of nonscheduled air services (Docket 1501).

While noncertificated air cargo carriers and noncertificated indirect air cargo carriers would be permitted to engage in interstate, overseas and foreign transportation pending decision on their route applications, noncertificated irregular air carriers would be barred completely from foreign operations three months after the new regulation had become effective.

▶ **Cargo Groups Self-Liquidating**— Both noncertificated air cargo carriers and noncertificated indirect air cargo carriers would be self-liquidating groups. The former category initially would include active noncertificated airfreighters who had route applications on file 30 days after the effective date of the revised regulation. The group would be whittled down gradually as CAB decisions disposed of applications for certification.

All indirect air cargo carriers would be denied further exemption under Section 292.1 80 days after the freight forwarder case decision.

The term "nonscheduled carrier" fails to appear in any part of the Board's latest version of Section 292.1, having been replaced throughout by the words "irregular carrier."

Martin 202 Transport Makes First Test Flight at Baltimore

Eight more fuselages nearing final assembly as Capital Airlines is scheduled to get initial airline deliveries; Glenn Martin watches test.

With Glenn L. Martin watching from the control tower and listening to radio reports from the pilot, the Martin 202, twin-engine commercial transport, made its first flight at the Glenn L. Martin Co. airport at Baltimore, Md.

The flight culminated more than a year of planning and research (the mockup was shown the industry in August, 1945) and marked the entrance into the modern transport field of one of the industry's oldest companies which in the past has been chiefly noted for its military models.

▶ **First to PCA**—On the lines behind this first 202 to fly are eight more fuselages nearing final assembly. The first deliveries will be made to Capital Airlines (PCA) early next year.

At the controls of the 202 during its first flight was O. E. Tibbs, chief test pilot of the Martin company. Copilot was Raymond S. Nessly, flight engineer R. J. Bernier and flight test engineer Don Covington. After watching the test, president Martin declared the plane had realized the goal of a twin-engine plane with "economical moderate range operational characteristics."

First of a New Breed: *After one of the most widespread and effective advance sales campaigns in aviation history, the Glenn L. Martin Co.'s model 202, 40-passenger twin-engine transport, has made its initial flight. Setting the pace for a new technique in industry, the first 202 is a production model, not a prototype. Others in the series are now on the line and deliveries to more than a dozen airlines are scheduled to begin shortly after the first of the year.*

▶ **40-Passenger Plane**— A 40-passenger plane with a span of 92 ft. and length of 71 ft., the 202 has a cruising speed of 270-280 mph. and was designed for economical operation over distances of from 250 to 700 mi. It is powered by two Pratt & Whitney R-2800 engines each developing 2,100 hp. at takeoff. It is equipped with tricycle landing gear, double main wheels and steerable nose wheel.

Specifications as announced originally a year ago called for a gross weight of 34,300 lb., including a 10,890 disposable load. It was designed primarily for trunk airline operation over routes requiring stops a few hundred miles apart. Original estimates were that it could be operated at a direct cost of less than 10 mils per passenger mile over a range of 300 mi. at 220 mph. on 70 percent meto power. Direct operating cost would be exactly 10 mils per passenger mile at a range of 425 mi. and speed of nearly 230 mph. at 70 percent meto power.

Original designs of the 202 stressed ease of handling on the ground. Refueling can be accomplished from under the wing. There are two cargo compartments, one forward and one aft of the passenger cabin, with the doors opening on the side of the fuselage opposite the passenger door. In this way loading of both passengers and cargo can be accomplished with a minimum of confusion.

In addition to Capital Airlines, other carriers ordering the 202 and the 303 include United, Northwest, Delta, Eastern, Braniff, Chicago & Southern, Panagra, Cruzeiro Do Sul (Brazil), Aero-Posta (Argentina), Willis Air Service, National Skyways Freight Corp., U. S. Airlines, Mutual Aviation, and Air Borne Cargo.

LATEST NAVY PATROL BOMBER:
Sketch of the Martin XP4M-1, four-engine Navy patrol bomber which made its first test flight last week. Principal feature of the new plane is its top speed of 398 mph. and its unique engine installations which have a Pratt & Whitney R-4360-4 reciprocating engine and a General Electric I-40 jet in a single nacelle. Service ceiling is 16,400 feet and gross weight 81,887 lb.

Trainer Price Cut

Surplus Vultee BT-13 and SNV basic trainers have been reduced in price from $450 to $250, War Assets Administration has announced. They will be sold without priority, and because of the low price the usual dealer's discount has been eliminated.

As of early in November, WAA had in stock 2,286 trainers of this type, most of which were located at sales-storage depots at Augusta, Ga.; Clinton, Okla.; Fort Worth, Tex.; Jackson, Tenn.; Oklahoma City, Okla.; Ontario, Cal.; and Vernon, Texas.

1,522 Surplus Planes Still Held by FLC

A total of 1,522 surplus aircraft overseas remained in the hands of the office of the Foreign Liquidation Commissioner on Aug. 31, including a number of C-47 and C-46 types, according to the latest report of the agency. Sales in September totaled 157, including 66 C-47 models.

Greatest number of C-47 basics sold in August, 22, came from the Mediterranean theater and went to the Italian government. Fourteen C-47Bs in Noumea were sold to National Civil Aviation, New Zealand, and ten Bs to the Italian government. TWA bought two C-47s in the African-Middle East theater. Twenty-five Fairchild PT-26 primary trainers located in Canada were sold to the Uruguayan government.

Although past experience of OFLC has been that by the time inventory records from the field are received and coordinated in Washington some of the most desirable planes have been sold, the Aug. 31 inventory figures showed 159 C-46s on hand, 155 located in Manila and four in the African-Middle East theater. One C-46F was in AMET, the others being basics and As. In Manila, there was one C-46D, the balance being basics.

On Aug. 31, OFLC figures recorded a total of 264 C-47 types on hand, with 127 in the European theater. In Europe there were also two C-53s. Of 35 C-47 types in the Mediterranean theater, there were three Bs and two C-53s. In Manila was a total of 61, including four Navy R-4s, one C-47F and 10 Bs. Two C-54s were listed as being in Manila as of Aug. 31, but the fact that September sales do not show disposal of these might be taken as an indication that they were not in the best of condition.

As of Sept. 30, OFLC had sold airplanes and parts with an original value of $270,106,781 for $44,864,239.

Friedlander Heads PAC

John Friedlander, president of Aeronca Aircraft Corp., Middletown, Ohio, was advanced to chairman of the Personal Aircraft Council of the Aircraft Industries Association, at the recent meeting at Cleveland. He succeeds William T. Piper, president of Piper Aircraft Corp., Lockhaven, Pa. Gordon Sleeper, personal plane sales manager of Republic Aviation Corp., Farmingdale, L. I., was elected vice chairman to succeed Friedlander.

The council voted to organize the public relations directors of company members into a public relations advisory committee to work with Don Ryan Mockler, Hill & Knowlton public relations executive for the Council, in a coordinated public relations program. Next meeting of the Council will be held in January, with definite time and place to be set later.

NATA Reorganizes as State Federation for Legislative Action

"Bevo" Howard named president at Cleveland meeting; $40,000 budget approved by delegates from 30 states.

Clearing the way for renewed activity on the state level concurrent with the convening next year of 44 state legislatures, the National Aviation Trades Association has reorganized into a federation of state groups according to a previously drafted plan (AVIATION NEWS, Nov. 11), and elected Beverly Howard, president of Hawthorne Flying Service, Orangeburg, S. C., president for a term ending Dec. 1, 1948.

At a Cleveland meeting attended by nearly 100 delegates from 30 states, NATA adopted a work program for the ensuing 13 months and approved a budget of $40,000 to implement it. The money is to be raised by assessments of two cents per 100 persons in states where the per capita income is $750 per year, and three cents per 100 persons where the per capita income is $750 or more. Under this formula, New York and Pennsylvania would contribute the largest amounts, $4,050 and $3,000 respectively.

▸ **Officers Listed**—Elected for two-year terms in addition to Howard, were, first vice-president, Norman Larson, Pacific Aircraft Sales Co., Burbank, Cal.; second vice-president, F. Leslie Marsden, Buffalo Aeronautical Corp., Buffalo, N. Y.; supervisory treasurer, Wilfred Post, Lehigh Aircraft Co., Allentown, Pa. Regional vice-presidents are: I, Sydney Nesbitt, Atlantic Aviation, Teterboro, N. J.; II, Frank Hulse, Aero Service & Supply Co., Birmingham, Ala.; III, Arthur Curley, Curley Flying Service, Galesburg, Ill.; IV, vacant; V, F. C. Anderson, Iowa Airplane Co., Des Moines; VI, J. G. (Tex) Rankin, Rankin Aviation Industries, Tulare, Cal.; VII, A. L. Baxter, Central Aircraft Corp., Yakima, Wash.

For the first time, NATA set up a special group of vice-presidents to handle specific interests of the membership. These are: R. E. Flynn, Miami Aviation Center (Airports); Leslie Bowman, Aircraft Sales Co., Ft. Worth, Texas (sales & service); Wesley Raymond, Orlando, Fla. (instruction & training); E. G. Kidwell, Standard Aircraft Co., Los Angeles (specialized trades); and Clarence Ludwig, St. Petersburg, Fla. (non-scheduled).

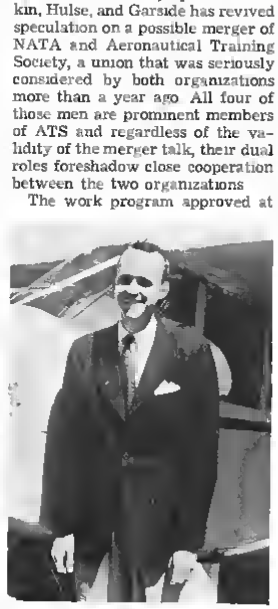
▸ **Turner Gets Post**—Roscoe Turner, retiring president of NATA, was elected chairman of the Special Advisory Committee and other members are J. R. Harrington, Mansfield, Ohio, and Joseph Garside, E. W. Wiggins Airways, Norwood, Mass.

The Association continued in office, also for two years, Harry Meixell as executive director, Edna B. Walker as secretary-treasurer, and E. Lane Cricher, general counsel.

Election of Howard as president and inclusion in key spots of Rankin, Hulse, and Garside has revived speculation on a possible merger of NATA and Aeronautical Training Society, a union that was seriously considered by both organizations more than a year ago. All four of those men are prominent members of ATS and regardless of the validity of the merger talk, their dual roles foreshadow close cooperation between the two organizations.

The work program approved at the Cleveland meeting defines the spheres of activity of state association and the national headquarters, mainly on a basis of federal and state actions. National headquarters will also draft model state work programs and constitutions.

Reception to the state association idea has been excellent, according to executive director Meixell, who points out that a number of state associations are now hiring paid directors to insure an active organization.



NATA President *Beverly Howard, president, Hawthorne Flying Service, Orangeburg, S. C., has been elected president of National Aviation Trades Association at a reorganization meeting of the Association in Cleveland. Howard's term expires December, 1948.*

CAA Will Revise Airport Regulations

No change in formula for federal aid is contemplated, Donaldson tells municipal officials.

CAA will announce shortly, possibly next week, revision of the regulations under which airports will be constructed under terms of the Federal-Aid Act, according to Charles B. Donaldson, assistant administrator for airports. Before the end of the month, Donaldson also has stated, CAA will disclose the new national airport plan on which approved projects must be based.

In an address before the American Municipal Association in Chicago, Donaldson declared that CAA, while taking cognizance of many of the suggestions advanced at the recent hearing in Washington on the airport regulations (AVIATION NEWS, Nov. 11), will not change the formula for determining the federal contribution to an approved project.

▸ **Formula Controversial** — This formula, possibly the most controversial item at the hearing, limits the federal contribution to $2,000,000.

'In respect to the formula (the regulations) will not be changed fundamentally," Donaldson said. "We believe Congress clearly indicated its intent when it wrote . . . that the federal government will pay 50 percent of the cost of Class I, II and III airports, and may pay up to 50 percent of the cost of larger fields.

'Good administration dictated the development of a formula as an impartial method of determining just what the federal share of large fields should be. The alternative would be to let the program become a mere mass of words without consistency or purpose with those able to exert the greatest pressure absorbing the bulk of the funds to the exclusion of other needed projects."

▸ **Scouts Control Fear**—Donaldson recalled that at the hearing representatives of local governments expressed the fear that under the regulations CAA would have too much control over the actual administration of municipally-sponsored airports.

"I can assure you that the only intention of CAA was to spell out procedures so plainly that the federal investment was assured of protection," he said. He added that CAA now realizes its intention was misconstrued "due to unfortunate verbiage which made it appear that we were excessively zealous in this direction." CAA is now rewriting the applicable sections of the regulations.

"CAA has no intention of looking over your shoulder as you conduct the day-today operations of your airport," Donaldson stated. "It will be your airport, and you will be free to operate it just as you would your fire department, your parks, or any other public utility."

AVIATION CALENDAR

Dec. 2-4—SAE National Air Transport Engineering Meeting, Edgewater Beach Hotel, Chicago, Ill.

Dec. 2-6—American Society of Mechanical Engineers Annual Meeting, New York.

Dec. 3—PICAO Rules of the Air and Traffic Control Practices Division Meeting, Montreal.

Dec. 6—Air Transport Association Directors Meeting, Carlton Hotel, Washington, D. C.

Dec. 4-5—Air Transport Association Annual Meeting, Carlton Hotel, Washington, D. C.

Dec. 10—International Air Transport Association North Atlantic Traffic Conference, New York.

Dec. 12-15—International Aviation Celebration, El Paso, Texas.

Dec. 16-18—Aviation Distributors and Manufacturers Association Annual Meeting, Edgewater Beach Hotel, Chicago, Ill.

Dec. 17—Anniversary Dinner, Aero Club, Hotel Statler, Washington, D. C.

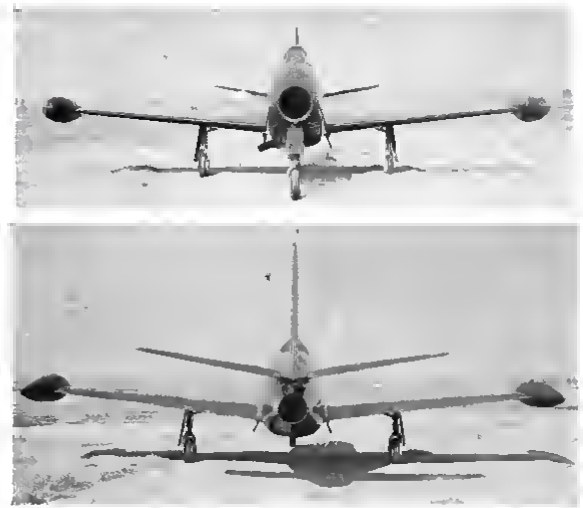
Dec. 17—Wilbur Wright Memorial Lecture—Dr. Theodore Von Karman, Hotel Statler, Washington, D. C.

Jan. 6-16—Aviation of Tomorrow Exhibit, Miami, Fla.

Jan. 10-11-12—All American Air Maneuvers, Miami, Fla.

Jan. 27-30—IAS Annual Meeting, New York.

Feb. 1-8—New York Aviation Show, Grand Central Palace, New York.



XFJ-1 FORE AND AFT:

Extremely clean lines of North American Aviation's new jet fighter for the Navy are indicated in the two views taken from the front and rear. Dimensions of the XFJ-1 are: span, 38 ft., 1 in., length, 33 ft. 7 in., height 14 ft., 6 in. (Navy photos)

Washington Airport Gets Approval for New Hangars

Although the Civilian Production Administration has given the green light to construction of five new hangars at the Washington National Airport, several obstacles remain to be worked out before the project can get underway, according to W. C. Clark of the Public Buildings Administration.

The Dyker Building Co. of New York, with a bid of $4,497,000, is the low bidder on the five-hangar construction project. Clark said, however, that there is question as to whether the airport will be able to allocate this amount to the hangar construction out of its total construction fund of $5,341,000. He reported that it would probably mean trimming of other planned improvements at the airport—paving, boiler plant and bridge constructions.

Clark estimates that it will take from one year to 15 months to construct the five hangars—if building materials are obtained without delay.

Private Financing Rate Rose 25% During War

Privately-financed aircraft industry expansion during the war years was four times the normal prewar expansion rate of the industry, according to the Civilian Production Administration's report on wartime manufacturing plant expansion.

New privately-financed aircraft engine, parts, and accessories facilities totaled $21,400,000 in 1939—$6,700,000 in structures and $14,700,000 in equipment. During the war years, 1940-45, private-financing of aircraft industrial expansion skyrocketed to an annual average rate of $84,000,000—$42,400,000 in new structures and $41,600,000 in equipment.

While expansion in aircraft, engine, and parts plants in 1939 accounted for only 1.7 percent of the total privately-financed industrial expansion in that year, privately-financed aircraft industrial expansions accounted for 7.1 percent of the total privately-financed plant expansions during the 1940-45 period.

Of the $3,894,000,000 expansion in aircraft, engine, and parts facilities during the 1940-45 period, $3,474,000,000 (89.2 percent) was federally financed, and $420,000,000 (10.8 percent) privately financed.

Value of new structures constructed during the period totaled $1,556,000,000 of which $1,344,000,000 (86.4 percent) was federally, and $212,000,000 (13.8 percent) privately financed. New plant equipment, totaling $2,338,000,000, was 91.1 percent ($2,130,000,000) federally financed and balance, 8.9 percent ($208,000,000), privately financed.

Business End of XS-1: *From the four nozzles which normally would project from the rear of the Bell-built supersonic test plane, XS-1, will come the 6,000 lb of static thrust expected to hurl the aircraft into and possibly through the sonic speed range (AAF photo)*

Unique Features Built Into XS-1

Revised fuel feed system cuts theoretical speed 700 mph. and reduces rate of climb to 28,000 ft. per minute.

With the release by AAF of many details of the rocket-powered XS-1 flying supersonic laboratory, engineers are studying the needle-nosed aircraft (AVIATION NEWS, Nov. 25) built by Bell Aircraft Corp. which represents departures in several respects from accepted thinking.

In the face of much experimentation with swept-back wing designs, the XS-1 has straight, although extremely thin wings. The maximum thickness is only ten percent of the chord. This, like the entire aircraft, however, is frankly experimental, with future supersonic designs to incorporate experience learned from the XS-1 flight which is tentatively scheduled for this month.

▸ **Built For Strength**—One of the most novel aspects of the aircraft is extreme strength. Designed to withstand a force of eighteen times the pull of gravity, it has wings of aluminum alloy skin machined out of solid stock with a thickness at the butt of more than one-half inch. Skin at the wing tips is slightly more than one-eighth inch. Wing loading at overall weight will be about 100 lb. per square inch. AAF claims it is the most sturdy airplane ever built.

When the XS-1 is hauled into the air for its first powered flight it will be carrying a gross load of about 13,069 lb., which is considerable for its size. Its span is 28 ft., wing area 130 sq. ft., length 31 ft., and the top of its tail is only 10 ft. from the ground. The empty weight is 4,892 lb., 526 lb. of which is test equipment. The rocket fuel weighs 8,177 lb.

▸ **1,000 Mph. Speed**—Although it is believed the XS-1 can attain a speed of 1,000 mph., this is 700 mph. slower than the design speed of the craft. This is due to a substitution in the originally-planned fuel feeding system.

First plans called for the four 1500 lb. thrust rocket motors to be fed by alcohol and oxygen forced into the burner chambers by a specially designed turbo pump.

Due to a delay in solving all the problems presented by this pump, an alternate system was adopted in order not to hold up the flight testing. As presently-equipped, the XS-1 uses a pressurized system with gaseous nitrogen being used to force the liquid oxygen and alcohol into the burners. With this system, the plane can operate at full 6,000 lb. thrust for 2.5 min., while with the turbo pump it is estimated power duration would be 4.2 min.

The pressurized system will give an estimated 28,000 ft. rate of climb as against a 45,000 ft. rate of climb with the other system.

JET HELICOPTER:

This German jet-propelled helicopter is being tested by AAF engineers at Wright Field. Jet nozzles are on the tips of the rotor blades, one of which is being examined by Lt. James Cooperthwaite. (Acme photo)

★ ★

Sees Cargo Gains Despite Depression

Co-author of Curtiss-Wright survey boosts previous estimate of airfreight potential.

Cargo volume will continue to grow enormously during the next few years whether or not there is an economic depression, John L. Drew, aviation consultant, declared at CAB's Fort Worth airfreight hearing late last month. A business slump, he stated, might even spur the development of air cargo.

Co-author of the 1944 Curtiss-Wright survey, "Air Transportation in the Immediate Post-War Period", Drew said that recent developments had forced him to revise sharply upward his previous estimates. Whereas two years ago he saw a 1948 airfreight potential of 195 million ton miles, assuming a 12-cent rate, Drew now predicts 1947 airfreight volume may approximate 1.2 billion ton miles at a 12½ cent tariff.

▸ **Slick Testimony**—The consultant testified in behalf of Slick Airways, which estimates it will fly over 87,000,000 ton miles in 1947 if certificated for common carrier operations. During October, Slick was operating contract flights at a rate of over 24,000,000 ton miles annually.

Earl F. Slick, president of the San Antonio carrier, testified earlier in the hearing that his company probably would cease operations if not certificated. He also emphasized the need for flexible area-to-area flights in cargo service. Pointing out that passenger traffic holds to fairly even levels, Slick said that freight in certain sections of the country may vary from a seasonal high—during one month—to practically nothing the remainder of the year.

Following presentation of Slick's case, L. Walker Boggs, president of Lone Star Air Cargo Lines, testified that in view of profitable operations since service began last winter his company probably would seek to continue flying on a contract basis if unsuccessful in obtaining a certificate. Unlike Slick, which has carried cargo only, Lone Star has flown passengers also.

▸ **Lone Star Story**—Boggs declared that four original partners bought and converted the first C-47 operated by Lone Star. Other C-47s were added as profits permitted, with seven now owned and operated.

Only three applicants, Slick, Lone Star and Airnews presented their cases at the Fort Worth sessions of the airfreight hearing. The proceeding is to be resumed in Washington today (Dec. 2).

Other industry developments:

▸ **Air Commuters Club**, Inc., New York, was scheduled to begin commuter service between Rochester and New York late last month with two leased DC-3s. The operation will provide upstate business men with a morning flight to Newark Airport each day and a return trip in the evening. Weekend trips to Miami Beach are also in prospect beginning Dec. 6 and continuing through the season with flights leaving New York Friday evening and returning in time for business Monday morning. President of Air Commuters Club is Max Stell, former Pan American Airways pilot. Raymond A. Keller is executive vice-president.

▸ **Aeravias Latina Americanas**, San Salvador, has flown over 1,500,000 lb. of freight to or from its St. Petersburg, Fla., station since beginning operations May 18.

▸ **Robinson Airlines**, Ithaca, N. Y., late last month flew its 2,000,000th passenger mile on its scheduled intrastate routes.

▸ **Aviation Maintenance Corp.**, Van Nuys, Cal., has signed a contract with the Royal Swedish Air Board to ferry 100 Noorduyn AT-16s, now in Canada, to New York for export to Sweden for Royal Swedish Air Force use. The planes were purchased by the Swedish government from the Foreign Liquidation Commission.

▸ **Pan Maryland Airways**, Baltimore, planned to begin scheduled intrastate service to Annapolis and Easton late last month. Company has been authorized by the State

ATLAS 'SKY MERCHANT':

Standard Oil Co. of New Jersey has installed a streamlined display of Atlas automotive and aviation accessories in a DC-4 which will visit more than 600 airports in the U. S. and Canada and may make a world-wide tour. The plane is equipped to accommodate full-scale promotion and training meetings for dealers. Fittings include 16 lounge-type chairs, a sound motion picture projector with a large screen, a bunk room for two persons, and a galley.

Public Service Commission to serve 13 Maryland points. Two Bellanca Cruisairs and a Republic Seabee are on hand.

▸**Challenger Airlines,** Salt Lake City, has suspended interstate flights to Phoenix, Ariz., and intrastate operations to St. George, according to George W. Snyder, Jr., president.

▸**Standard Air Cargo,** San Diego, Cal., has contracted with Pacific Airmotive Corp., Glendale, for engine, propeller and instrument overhaul in all SAC planes.

AAXICO's Service Will Be Revamped

Uncertificated carrier agrees to comply with CAB cease and desist order.

American Air Export and Import Co., one of 12 uncertificated operators cited for allegedly conducting scheduled common carrier service in violation of the Civil Aeronautics Act, has consented to CAB's issuance of a cease and desist order. Concurrently, the company outlined to the Board its plans for adjusting operations to meet the currently-effective nonscheduled exemption (Section 292.1 of the Economic Regulations).

AAXICO's action followed conferences between its attorneys and CAB public counsel under the Board's new shortcut procedure for handling cases involving show cause orders (AVIATION NEWS, Nov. 11). In accepting the cease and desist order, AAXICO did not admit that it has ever violated any provision of the Civil Aeronautics Act "or any regulation lawfully issued pursuant thereto."

▸**Avoid Litigation**—The nonscheduled operator—one of the largest uncertificated passenger-carrying lines in the country—said it must submit to the cease and desist order because it was unwilling to engage in lengthy litigation, the financial burden of which would be ruinous even if the fight were successful. AAXICO emphasized that it still differs with CAB's interpretation of the nonscheduled exemption as expressed in the Trans-Marine and Page Airways cases and the nonscheduled investigation (Docket 1501).

As a result of the cease and desist order, AAXICO on Nov. 17 abandoned its New York-Atlantic City service and curtailed its New York-San Juan, P.R., operations. To keep its equipment (nine DC-3s) in operation, the company is investigating the feasibility of wholly intrastate services in Florida, New Jersey and elsewhere.

▸**Increase Freight**—Contract air-freight operations between the Eastern seaboard and the Caribbean may be increased along with contract passenger flights in continental U. S. AAXICO may also engage in private carriage of its own merchandise, buying goods in the U. S. and flying them to Puerto Rico or other points where there may be a market. The company intends to continue selling all-expense "package tours" between northern U. S. and points in Florida and the Caribbean.

CAB's cease and desist order requires AAXICO to file complete reports of its operations for December, 1946, and January and February, 1947. The Board will analyze the information to ascertain whether its directive is being complied with fully.

Meanwhile, AAXICO has filed an application for a temporary exemption and another for a certificate to operate between New York/Newark and Atlantic City. The company states that from Apr. 29 to Nov. 17 it made 740 round-trips between the two points carrying 17,204 passengers on one to eight flights daily. Discontinuance of the operation Nov. 17 and failure of Eastern Air Lines to provide adequate service has inflicted hardship on persons traveling between the metropolitan area and the resort city AAXICO asserts.

AIRBORNE AT MILLVILLE BASE:

Six of Airborne Cargo Lines' nine DC-3s are shown at their new Millville, N. J., base following their move from Baltimore Municipal airport. The Millville field, formerly an AAF fighter base, has four 5,000-ft runways and since last spring has been operated by Tri-City Aviation Service, Inc., under lease from the south Jersey municipality. Shortage of hangar space at the Baltimore airport, which forced Airborne to shift its operations base, is continuing to cause concern among Baltimore city officials and business interests.

Pacific Air Lines Plans Expansion

Pacific Air Lines, Los Angeles, plans to enlarge its present fleet of five DC-3s through addition of a C-54E by Dec. 15 and a second C-54 by Jan. 1, officials of the company announced following the intrastate carrier's reorganization.

Originally a Los Angeles-Sacramento operation, PAL has shifted its service gradually to include six daily roundtrips out of Lockheed Air Terminal, Burbank, with stops at San Diego, Long Beach, Fresno, Stockton, Sacramento and San Francisco. Basis for the company's optimistic venture into C-54 operations at a time when both United Air Lines and Western Air Lines are retrenching and reducing their Los Angeles-San Francisco schedules is the reported persistence of a profitable PAL load factor averaging 67 percent.

Originally financed by a group of oil company capitalists headed by Earl Gilmore, PAL became almost entirely a veterans' organization this fall with the sale of 93,000 shares of Gilmore group stock to other interests headed by T. D. Harvey, vice president, and George Tompkins, new president.

The Tompkins-Harvey group holds majority control of PAL through possession of 96,000 of 151,000 shares issued. While it is probable that PAL will expand its financing in the near future, it is the intention of the present backers to maintain virtually a closed corporation and not to attempt a public marketing of new stock.

* *

Jet Materials Progress Slow; Search For Heat Resistant Alloys

Chrome-nickel-cobalt alloys, specified in current gas turbines, only satisfactory solution so far; problem arises from fact efficiency increases with operating temperature increase.

Search for superior heat resistant materials for jet and similar type engines, although being pressed on many fronts, is progressing very slowly in the view of engineers. The materials problem, regarded as one of the most critical in the industry, is cloaked in security, but broad trends are becoming apparent.

The problem arises from the fundamental principle of the heat engine in that it increases in efficiency with the increase in operating temperature. Higher power output and reduction in fuel consumption depends largely on heat-resistant materials, primarily in the combustion chamber, the turbine blades and the nozzle.

After years of grappling with the subject, engineers are inclined to eliminate steel as a base for high temperature alloys. The comparatively low stress rupture temperature of iron renders it useless. None of the aircraft gas turbine designs tested to date has utilized alloys containing more than 60 percent iron in the turbine, buckets, nozzles or case and current models use materials containing less than 30 percent iron in most cases. Those turbine units now in the development stage use materials containing far less iron in their composition. Metallurgists are convinced that materials designed for operation at temperatures higher than 1,500° F. will contain no ferrous materials of any kind.

Replacing iron in the heat resistant materials picture are three elements; chromium, nickel and cobalt. Although more expensive, more difficult to process and lacking some of iron's desirable characteristics chrome - nickel - cobalt alloys are being specified in all current aircraft gas turbine projects and have proved so far the only satisfactory solution to the problem.

Simple heat resistance however, is not the major criteria in the selection of a suitable turbine alloy. The resistance of the alloy structure to changes of character at elevated temperatures with resulting loss of useful properties constitutes the major metallurgical problem. Alloy X (composition of which is restricted) has a maximum strength of more than 100,000 psi at room temperature. Although it can withstand temperatures as high as 2 000° F. its strength at 1,200° F. is only a little more than 30,000 psi., making it useless for the highly-stressed parts of a gas turbine.

Progress has been made since 1942, when the first Whittle unit was brought to this country and the aircraft gas turbine industry in the United States was created. Operating temperatures have increased from the 1,000-1,200° F. range of that period to the 1 350-1,400° F. range now in operational use. Designs are now in the experimental stage with a 1 700-1,800° F. range, which constitutes the maximum practically attainable at the present time.

Various methods have been used to alleviate the problem of high temperatures in the turbojet engine. The Germans simply restricted the operating temperatures of their units to lower limits thereby protecting the poor heat resisting qualities of the turbine alloys they were forced to use. They also showed considerable originality in the use of cooling systems in several experimental units. These included such systems as "intermittent" cooling, in which the turbine blades pass flame jets and cooling air jets alternately, liquid spray systems of various types and simple regenerative systems. The British have advanced a "ducted fan" system of their metropolitan Vickers unit in which a supply of fresh, cold air is taken from the airstream by a secondary turbine stage of larger diameter than the primary turbine stage.

Ceramics have not proved a "cure-all" to the problem by any means, despite early optimism. Although certain ceramic materials, which cannot be identified, have exhibited promising characteristics in laboratory tests, each of them has drawbacks which prevent their immediate application. Although a large variety of welding, bonding and cementing processes have been developed for attaching ce-

HINT OF THINGS TO COME: *Boeing Aircraft Co. is nearing the final stages of assembly on its AAF C-97 cargo planes, military freight version of Boeing's commercial transport. The 97s are scheduled first off the lines, Stratocruisers next, but work is already advanced on the first of the civil planes.*

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namic and metal materials the low strength of ceramics presents problems in their application to the astonishingly high centrifugal stresses produced by the high-speed aircraft gas turbine.

The heat resisting qualities of several hundred alloys have been carefully examined over recent years under a broad program directed by the Office of Scientific Research and Development, and involving numerous government and industrial laboratories but no chemillurgical pattern has yet evolved. At this time there is no one element which, when added to a given alloy, will increase its heat resisting qualities.

Heat resistant materials comprise a basic research problem which will be solved, it appears, only through tedious laboratory tests and analyses with final success an evolutionary process, as are most research projects.

Pre-Rotation Motor For Big Plane Wheels

Dever device to be flight-tested on Constitution; full pre-rotation speed in 2 min.

Trends toward bigger transport aircraft will provoke close study of an airplane wheel pre-rotation electric motor which is expected to get its first flight tests on Lockheed Aircraft Corp's "Constitution." Wells Aircraft Parts Co. of Los Angeles, is reported to be constructing 28 units for Lockheed.

Inventor of the device is Otto E Dever, 4102 W Victory Boulevard, Los Angeles, who has been associated with the Wells company in the development.

Preliminary engineering tests indicate that the Dever motor will build up the full pre-rotation speed of a wheel in two minutes, and hold it to within 5 percent of the airplane's designed touchdown speed.

Armature and field units are designed as integral parts of the airplane wheel assembly.

The motor for the Constitution has a total weight of 15 lb. and one will be installed in each of the airplane's eight main landing gear wheels, which individually weigh 295 lb.

It is intended that the motor will be fully automatic in its operation, and started (after the landing gear has been lowered) by a switch actuated by the lowering of the airplane's flaps.

The model for the Constitution has been designed to rotate the landing gear wheel at 630 rpm. for an airplane touchdown speed of 90 mph. The motor can be wound variously to hold wheels to rotating speeds required for aircraft of varying landing speeds.

In the Constitution motor an auxiliary power plant will provide an electric input of 120-v. 50 amps. For a starting load the equivalent of 9 hp. Peak rotation can be maintained with a 15 amps input, or the equivalent of 2 hp.

Lockheed's specifications have called for the operation of the motor for not more than 5 min. per landing, allowing two 5 min. runs in 15 min. The latter operational requirements anticipates one poor landing approach and a second successful landing attempt.

Immediate commercial interest will be attached to Dever's design of a somewhat smaller motor for tests on the wheels of Lockheed's new "gold plate" Constellation.

The Dever motor has been under development for one year, and is the outgrowth of the inventor's original intention of producing a motor that could be applied to the wheels of high-speed motor buses.

The aircraft version is distinctive in its simplicity and compactness, the Constitution model having a width of only 1¼ in. and a diameter of only 10 in. across the air gap within the armature.

Mr. Dever told AVIATION NEWS:

"Actually, I have made use of a 'forgotten' motor, using an old ring-type winding that has been in the discard for fifty years."

Essentially, the motor consists of an outer armature ring of 168 segments, and a field unit of 12 coils.

To meet rigid aircraft performance specifications, Dever has used extreme care in insulation of the motor against heat and moisture. Fiberglass and mica are primary insulating materials, and final insulation is obtained by the application of Dow-Corning 996 silicone varnish, baked at 300° F.

Engineering interest in the Dever motor undoubtedly will be intense because of the parade of heretofore unsuccessful attempts to obtain a practical method of pre-rotating aircraft wheels within close landing speed tolerances.

One West Coast manufacturer is reported to have spent $200,000 in the engineering of an electric motor pre-rotating system that failed in final tests.

Previous devices have varied from electric motors attached to landing gear struts and geared to a gear plate bolted to the rim of the wheel, to small auxiliary gasoline engines powering a chain drive leading to the wheel.

While one of the most simple pre-rotation offerings has been the use of tire fitted with wind cups, this method produced rotating speeds below landing rpm.

BELL PRODUCTION LINE:

Bell Aircraft Corp. has in operation at its Niagara Falls plant two parallel production lines on its two-place helicopter, one for the civilian Model 47 version, the other for the military craft. At the National Aircraft Show last week Bell announced orders for approximately 40 47Bs valued at about $1,000,000. Deliveries are expected to be completed by end of the year.

RENEWED TIN GOOSE:

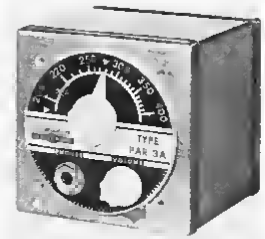
Grand Central Airport Co., Glendale, Calif., has finished overhaul and modification work on one of its oddest jobs—a Ford tri-motor transport about 15 years old. Plane is owned by Asiatic Petroleum Co. which uses it as a cargo carrier in Ecuador. Grand Central mechanics replaced the old landing gear with wheels and brakes built for a Douglas A-26, and cut a 6 by 8-ft. cargo hatch in the top of the fuselage of the all-metal Ford.

Bendix Small Range Receiver

Weighing only about 1½ lb., an unbelievably small range receiver with Bendix aviation quality performance was announced recently by Bendix Radio Division of Bendix Aviation Corp., Baltimore, Md.

Shown for the first time at the National Aircraft Show at Cleveland the Bendix Radio Type PAR-3 Range Receiver is ideally suited to the smaller types of personal aircraft that are not equipped with storage batteries.

Receiver can be either mounted in instrument panel through a standard A-N hole with dry batteries remotely located or, with couple turns of the tape, it can be attached to the battery box, providing a small portable unit that requires only an antenna connection which is provided through bottom of the case. It can be used for airport traffic control, student control, cross-country radio range navigation, and weather reports.



Finished in a blue-green hammered effect metallic lacquer which presents a pleasing color contrast with the maroon dial and ivory knobs, the new receiver is 3-11/16 in. cube. Tuning range is 195 to 410 kc; circuit is a 4-tube superheterodyne using an intermediate frequency of 455 kc. Sensitivity is 5 mv. for a 5:1 signal to noise ratio. Selectivity is 25 kc. total band width for 40 db. attenuation. Maximum audio output is 125 mw., using 67½ volt "B" battery supply.

New Packard Jet Engine

Development of a new type of turbo jet engine which has operated successfully on a test stand has been announced by Packard Motor Car Co. President George T. Christopher said the engine will remain on the restricted list until it goes into production which may be next year.

Packard is engaged on the project at Toledo, Ohio, under an agreement with the Air Materiel Command of AAF. Packard is building at Toledo a new $3,500,000 turbo jet laboratory which is scheduled for completion in the spring. It will include facilities for testing jet engines and parts in temperatures as low as 70 degrees below zero, and at altitudes up to 42,000 ft.

Guided Missile Project

The British Ministry of Supply has imported ten German technicians to work on guided missiles. They join 31 other German scientists who have been employed previously by the British for research in aerodynamics, jet propulsion and other fields.

Employment of German technicians was decided upon last May. They sign contracts on a voluntary basis and live in Britain under the same restrictions as other enemy aliens. Negotiations are now under way with 15 more Germans to work at the Royal aircraft establishment at Farnsborough.

Lightweight Fuel Tank

Made of specially compounded synthetic rubbers, plastic and nylon to withstand —40 to 200 deg. F temperature range, a crash resistant rubber fuel tank has been developed by U. S. Rubber Co. Tank is expected to be twice as strong as previous tanks of its type with only a fraction of its weight. New tank unit is supplied as complete packaged item ready for installation.

Small Plane Battery

Following a nationwide survey by Willard Storage Battery Co. to learn the detailed service situations a storage battery encounters in private aircraft, company has developed a new small plane battery said to have more power, higher performance and longer life than any previous unit its size.

Designated Type AW-12-25, it is a 12-v. battery of standard external dimensions, but with a generous 25 ampere hours capacity at the 5-hr. rate.

Cold starting performance has been raised at least 40 percent. Internal discharge, common to all storage batteries, has been materially reduced, and weight has been cut to a maximum of 23.5 lb. Improved protection against acid spray or spillage also has been provided.

Lightplane Leaders Are Optimistic Despite Seasonal Market Slump

Sales slump attributed to tightening of backlogs; training curtailment in snow states and customers waiting for spring delivery; trend toward four-place personal planes seen.

By ALEXANDER McSURELY

What are the factors behind the general softening in personal aircraft sales experienced by almost every manufacturer in recent weeks?

A compound answer from various manufacturers and dealers to this question includes the following explanations.

▸ **There has been** a decline in personal plane sales every pre-war year during the fall and winter months, and 1946 won't be an exception.

▸ **The demand** for trainers has fallen off sharply due to less flight training in the "snow-belt" states during the bad flying weather season.

▸ **Customers** who have ordered planes and still want them, are waiting for better weather next spring before taking deliveries.

▸ **A number** of customers found other uses for their money, or didn't have the money, when it came time for them to take delivery on planes they had ordered.

▸ **A considerable** part of the orders backlog listed by virtually all manufacturers, was duplicated and when a customer took delivery on one plane he cancelled his other order or orders.

At the recent National Aircraft Show, the spokesmen for plane manufacturers represented at Cleveland, took an optimistic viewpoint on the personal aircraft market, but admitted that the industry currently is going through a "wringing-out" period in which a number of companies may be expected to drop out of the competition.

John Kennedy, president of Globe Aircraft Corp, expects his company's November sales to approximate October sales. He also expects to adjust December production to 50 percent of capacity in line with seasonal fluctuation of sales which apparently is "affecting all members of the personal aircraft industry."

In answer to an AVIATION NEWS query, Kennedy said: "Globe has not filed a reorganization petition and does not contemplate filing such a petition. Globe plans to make available to the public a quality product, proven by approximately 1,000 Swifts now flying in this country and abroad."

▸ **Piper Cites Backlog**—William T. Piper, Sr., president of Piper Aircraft Corp., which in October set a new record for lightplane shipments (1105 planes) flatly denied that the light airplane market was exhausted, and pointed out his company had a guaranteed backlog for the three-place 100 hp. Super Cruiser of more than 7,000 orders.

"New models designed for practical transportation will create unprecedented demands upon the aircraft industry," he said. "It is only natural that, during periods of expansion and reorganization, some heeds must fall but those who survive will emerge stronger than before."

William Blees, vice-president in charge of sales, Consolidated-Vultee, considers the present slump seasonal, expects sales to pickup "quite well again by March, 1947.

"Everyone in this business overestimated the market," he continued. "So long as we have a product seriously affected by the seasons, we will have such bad-weather letdowns. The fact that most of our present-day personal planes are two-place has a definite bearing on the present slump. So far as our (four-place) Stinson Voyager is concerned we have enough bona fide orders to take care of our entire production through 1947."

▸ **Navion Orders** — Ronald Burla, North American Aviation, Inc., assistant to the president, expects many present owners of two-place planes to switch over to four-place planes, says the four-place all-metal Navion production for the first quarter of 1947 is already ordered and more orders are coming in.

George Ryan, Engineering & Research Corp. director of sales, reports that the recent shutdown of his company's plant, due to resume production Dec. 9, has enabled distributors and dealers to sell planes which they have on hand and places them in a good position for the rest of the winter. In the last two weeks his company, which never took an export order until September, has taken 100 export

NO LANDING FEE: *Attempting to make a test case on Lockheed Air Terminal's new $2.50 landing fee for personal aircraft, John West, Los Angeles advertising man, right, landed his blue Ercoupe at the field with his attorney, Bertrand Rhine, former Lockheed test pilot, left, but the guard who makes collections ignored him, said fee collections were off, "for the rest of the afternoon." West contends the operating corporation has no right to charge personal plane landing fees "unless they are remitted in their entirety to the Federal government," because public funds were used for partial construction of the field, and to operate the control tower. (Schmidt photo)*

orders for Ercoupes. Ercoupe sales have slackened principally in the snow-belt states with 150 Ercoupes reported sold in California last month. Ryan anticipates the coal strike may tieup freight car shipments of planes if it continues.

▸**Shift to Chum**—John Friedlander, president of Aeronca, reported that his company had noticed a slackening in sales of the Champion, tandem trainer, but that sales of the side-by-side two-place Chief, were holding up. His company laid off its 300 employee night shift Nov. 20 to make changes in the production setup to build the two-place all-metal simplified control Chum at the Middletown, Ohio, plant and not at a Vincennes, Ind., plant as originally planned. Dealer and public interest in the Chum indicates a ready sale for that plane as soon as it is certificated and goes into production early in 1947.

Hugh Perry, vice-president of Waco Airplane Company, pointed out that his company had not yet flown the four-place tail-propeller simplified control Aristocraft, and did not expect to be in production on the airplane for several months. Advance indications of customer interest in the plane are encouraging, however.

H. C. Rankin, Beech sales manager, reported that the company had sold two Model 18 twin-engine Beechcrafts at the show, and was making no effort to take additional orders for the four-place Bonanza Model 35, since the company now had approximately 1500 orders for this plane. He anticipates major personal aircraft sales in 1947 will show more and more of a trend toward multi-place planes and away from two-place ones.

▸**Cessna Reaches Peak** — Derby Frye, assistant sales manager, Cessna Aircraft Corp., said his company was now producing 30 planes a day, its highest production rate, "and still we are not able to give our dealers all they ask for." He considers the present market condition a healthy one with the buyer much more selective and the dealer "getting out to work for a sale."

Leopold H. P. Klotz, president of Luscombe Airplane Corp., announced that his company was using the slack season to switch over production emphasis from the 65-hp. utility two-place Silvaire to the de luxe 85-hp. Silvaire. In connection with the change, approximately 400 Luscombe employees have been laid off as of Nov. 20 including only employees who have worked for Luscombe less than six months. Majority of these are expected to be recalled as production increases on the 85-hp. plane.

Ken Ellington, advertising and public relations manager, Republic Aviation Corp., which recently raised the price of the four-place Seabee amphibian to $6,000, reported that it was too early to make any accurate appraisal of the effects of the price increase. Production is slowly increasing on the Seabee, and public interest in it continues good.

RUNWAY REFLECTORS PERFECTED: *After more than a year's research and testing, the Scotchlite reflector method of marking airplane landing areas at night has been developed jointly by D. W. Onan & Sons, Inc., Minneapolis, and the Minnesota Mining & Manufacturing Co., St. Paul. Reflectors, made of canvas and covered with a reflecting material called Scotchlite, are placed at 100 ft. intervals, and are illuminated by the Onan mobile 3CK airport floodlighter, using three 1000-watt floodlights, shown in foreground. The arrangement makes night operations possible at a total cost of around $1500 for small airports.*

▸**Two Planes Missing**—Two leading pre-war lightplanes were not seen at the show. Both Culver Aircraft Corp., Wichita, and Taylorcraft Alliance Corp., Alliance, Ohio, are undergoing reorganization.

T. J. Morris, and Van Grant, Culver president, were named trustees of Culver aircraft by federal judge Arthur Mellott, with Grant designated to manage the plant. Grant told the court Culver is not insolvent, but is unable to pay debts as they become due. It is reported that Culver has approximately 50 completed planes and a substantial inventory of work in progress. The plant closed Nov. 8, when most of the 500 production workers were laid off. Grant said it was necessary for the company to remain a going concern in order to make debt payments in full.

New details of the Taylorcraft reorganization are reported in the Financial section.

Twin City Airport Plan Draws Fire

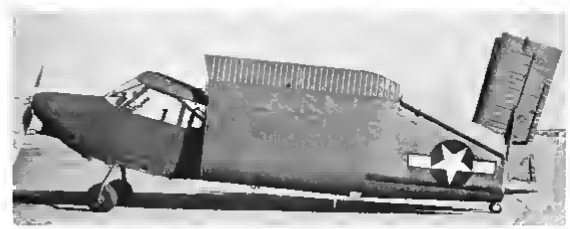
Location of secondary airports as outlined in the Minneapolis-St. Paul metropolitan airports commission master plan drew sharp criticism from representatives of Minneapolis suburban communities at a recent CAA administration hearing in Chicago.

O. B. Erickson, mayor of St. Louis Park, a Minneapolis suburb, who said he was speaking for 24 civic groups in the area west and south of Minneapolis, declared that secondary ports were located in and adjacent to built-up residential areas where their establishment would "decrease property values and disrupt tax rolls."

Erickson also said that affected communities had not been consulted prior to drawing up of the master plan. Adoption of the plan would "provide for the pleasure of a few at the expense of many," he added.

Golden Valley's mayor Harold Swenson supported Erickson's stand and said that while he supported the plan in principle, he believed secondary fields should have been located in unplotted areas.

State Senator Fred K. Gage of Olivia, Minnesota, asked that Minneapolis re-locate its main air terminal near New Brighton, several miles north of Minneapolis, rather than try to expand Wold-Chamberlain Field. He suggested a public hearing on his proposal be held in the area.



Stinson Folds Wings: *Versatile new Stinson L-13 Army liaison plane demonstrates folding-wing advantages which make it possible to tow the plane down the highway and which would be adaptable to almost any personal plane. Adjustable landing gear with 92.5-inch tread flight, can be narrowed to 61.6 inch tread for ground towing. (AAF photo)*

Convair Model L-13 Has Folding Wings

Personal aircraft makers striving for development of aircraft with increased utility may study with interest features of the newest military lightplane, the Consolidated-Vultee L-13 Army liaison plane now in production at San Diego.

While American personal plane makers have almost universally ignored the possibilities of folding-wing aircraft, the new L-13, is equipped with both folding wings and adjustable landing gear so that it can be towed behind a vehicle or hauled in a truck. The landing gear tread of 92.58 inches can be curtailed one-third by adjustment making it correspond to the normal tread of a surface vehicle. Adaptation of such features to a personal aircraft, as already shown in a sketch by Henry Clark in AVIATION NEWS, would provide a plane which could be hitched on to the back of an ordinary automobile tail first and hauled home to the garage from the airport, eliminating hangar storage problems. Powered with a 245-hp. Franklin engine, the L-13 is designed for normal operation with crew of three, but can carry six.

The first all-metal liaison plane is equipped with unusually large flaps which aid it in takeoff to attain the air in a 230-ft. run and to land at 43.5 mph in 227 ft. It cruises at 92 mph., has 115 mph. top speed, a range of 368 miles, service ceiling of 15,000 ft. and gross weight of 2,900 lb.

Conventional landing gear can quickly be replaced by skis or floats if needed. Easily converted to an ambulance plane, it will carry two litter patients, attendant and pilot. It also may be used for observation, communication, aerial photography, wire laying, courier service and light cargo.

Wingspan is 40 ft. 5 in.; length 31 ft. 9 in., and height 8 ft. 5 in.

Brazilian Lightplane

First Brazilian-built lightplane to enter the U. S.—the two-place tandem CAP-4 Paulistinha—was flown into Washington National Airport recently, dismantled inside the fuselage of a C-47. The big Douglas transport and the lightplane are owned by Francisco Pignatari, president of Companhia Aeronautica Paulista, of Sao Paolo, Brazil. He plans to exhibit the lightplane at various airports throughout this country as a demonstration of Brazilian aeronautical production.

Comet Production

Production of the two-place high-wing Hockaday Comet personal plane is expected to get underway Jan. 1 at Chico (Cal.) Municipal Airport, where the Hockaday Airplane Mfg. Co. has leased a plant. To present facilities, including a steel hangar and machine shop, the company will add a maintenance and repair shop.

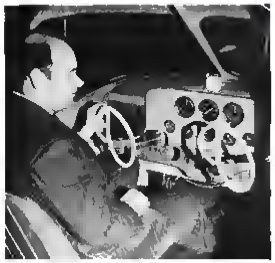
Single Wheel Control

A system of centering all controls of a conventional three-control lightplane in a single wheel and eliminating rudder pedals was displayed last week at the National Aircraft Show by Dayton Aircraft Products Sales, Inc. It has been flight-tested for 120 hours in a Taylorcraft and is now being installed in an Aeronca.

George W. Houk, president of the Dayton firm, announced that North American Aviation Inc., has been licensed to use the system, presumably in its four-place Navion. Two other manufacturers also are interested.

The new system was invented by Walter K. Beetle, Jr., former AAF officer, who envisioned it primarily for amputees. It is claimed to have many advantages for all pilots, however, and in addition cleans up the floor of the aircraft.

Designated Tri-control, it differs from system employed in two-control aircraft in that rudders and ailerons are not linked together. They can still be operated independently or with any degree of coordination desired by the pilot. The elevators respond to a push-pull motion of the wheel, the ailerons by a turning motion, and the rudder by a sidewise movement. The system can be installed in any aircraft that is already flying.



TRI-CONTROL INVENTOR: *A new aircraft control, which centers all three controls, rudder, aileron and elevator, in a yoke operated by the wheel, was demonstrated at the aircraft show by Walter Beetle, its inventor. The device is manufactured by Dayton (Ohio) Aircraft Products Inc.*

Firestone Has 1,000 Retail Airport Outlets

Firestone aircraft supplies and accessories are being sold by more than 1,000 independently owned retail outlets at airports in every state, H. D. Tompkins, vice-president, sales, announced recently.

Since Nov. 1944, when Firestone authorized its first dealer store, Flight, Inc., Cleveland, to handle the Firestone aircraft accessories, the distribution and merchandising system has been extended rapidly throughout the U. S. and to airport outlets in Hawaii and Alaska, also.

As soon as the dealer buys his initial stock of merchandise from Firestone he is entitled by franchise agreement to use the company's store planning, and display services and advertising aids such as signs, counter display cards package display cases, illustrated sales catalogs, advertising mats and direct mail brochures.

The line includes tires, tubes, wheels, brakes, batteries, spark plugs, brake linings, airplane dope, fabric, radios, Plexiglas wind shields, propellers, instruments, tools, flight glasses and jackets.

Individual airport dealers are supplied by centrally-located Firestone distributors, some of them servicing as many as 50 airport dealers. The company is putting into practice, in the new aircraft supply field, its merchandising experience developed in 20 years of association with home and auto supply retail outlets.

Briefing *For Private Flying*

HELICOPTER FEVER—Sikorsky aircraft engineers anticipate they may be able to make the sleek little new two-place S-52 helicopter for $15,000 in production quantity of 250-300, which would be the lowest commercial helicopter price yet, by almost half. Still not in the personal aircraft price range, and still not simple enough for the ordinary Sunday pilot to fly, the helicopters shown in Cleveland by Bell, Sikorsky and Firestone, again had the aviation-minded public drooling in a return case of anticipatory helicopter fever. We asked the president of one of the leading personal plane companies how soon he was going to start making helicopters. He replied seriously: "I wish we had the engineers to do it. It's something we had better get busy about."

DOWN PERSONAL PLANE ROW—Luscombe and Cessna, whose airplanes are very close to duplicates in general appearance, added to the confusion, at the aircraft show. Their display spaces were side-by-side, each showed two models, and each had a landing gear exhibit. Luscombe also exhibited the company's all-metal wing. Aeronca's new all-metal Chum, took most of the play away from the company's side-by-side Chief. The Chum now has Firestone landing gear, instead of the curved Aeronca-built gear shown in recent pictures. Just around the corner was the Ercoupe, pioneering two-control plane, for which the Chum will probably be the closest competitor, when production starts next year. For attractive styling of interior fittings, the Beech Bonanza and the Stinson Voyager 150 ran a close race while the North American Navion and the Stinson Flying Station Wagon showed the greatest utility as passenger-cargo carriers. Piper's Super Cruiser dressed up in new upholstery, and restyled interior fittings, and the Cub trainer fitted with one of Art Whittaker's crop-dusting installations, brought a lot of interested spectators over to their booth. Bellanca's Cruisair Sr. hospitably made its interior more available to the public by removing the door. Republic's Seabee amphibian and the Navion probably drew the biggest crowds, partly because of choice location of space, and partly because of the obviously mounting interest in larger personal planes.

MORE SHOW TALK—Waco's four-place unconventional Aristocraft isn't yet ready to fly, so it didn't make the show, but Hugh Perry and Francis Arcier, Waco vice-presidents, and veterans in the game of personal aircraft selling and designing, were very much in evidence. The Aristocraft nose wheel steering arrangement is designed so that it disengages when the nose wheel is retracted. Then when the gear is extended and the plane lands it remains disengaged, in effect a free swiveling nosewheel, until the pilot lines up his plane, and then re-engages the nose steering. Waco is reportedly interested in using the three-way wheel control device demonstrated at the show by George Houk of Dayton. Houk displayed a telegram, indicating acceptance of a licensing agreement to build the novel new control, from North American Aviation Inc. and reported that AAF, the Navy, and several other companies want to make the control themselves under the licensing arrangement or have him make it for them. Beech officials promptly quashed a rumor prevalent at the show that the Bonanza price had been hiked from $7,345 to $9,000. But they declined to get out on a limb to comment about the possibility of a price increase in the indefinite future.

Bill Mara, assistant to the president of Bendix Aviation Corp., handled the presentation of portraits to the lightplane company heads for Bendix radio in his customary adroit manner. If it hadn't been for a stockholder's meeting and decision, probably a wise one financially in view of the currently soft market for personal planes, Bendix and Mara would have used the aircraft show to announce their entries in the personal aviation scramble. Bendix models and engineering were still for sale as of last week but most of the excellent engineering staff which developed them had transferred to the University of Michigan Aeronautical engineering department under leadership of A. P. Fontaine, top man in the Bendix lightplane development. —Alexander McSurely

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Public Enthusiasm Cooling On Nonscheduled Financing

Prices fall below par on early stock flotations; new issues delayed awaiting better market; group facing stormy financial weather.

With a little patience and watchful waiting the Civil Aeronautics Board may soon be rid of the problem surrounding nonscheduled operators. This group is now in the midst of some stormy financial weather.

Earlier this year it was very easy to obtain public financing. In the periods of rising markets and in the general enthusiasm for aviation securities, little discrimination was shown for the shares of this tenuously situated industry. At least half a dozen companies managed to consummate public stock offerings before June of this year.

The markets then entered a declining stage and further public sales became virtually impossible. More than six issues have been in registration with the Securities & Exchange Commission for many months and are awaiting more propitious markets. At this time, it appears unlikely that any of these transactions will ever be made.

▸**Press Tells Story**—The existing market prices for every one of the nonscheduleds previously financed tells its own revealing story. Air Cargo Transport Corporation was the first company in the group to sell stock. In May 1945, the company sold 300,000 shares of common at $3.00 per share, of which it received $2.50. Shortly thereafter, this stock sold at a premium—at more than twice its offering price. Today the best bid showing is less than $1.00 per share.

Air Cargo Transport Corporation has placed an additional issue of 435,000 shares of common stock in registration on June 20th in an effort to obtain additional capital to bolster its depleted resources. Market conditions, however, make a public offering a hopeless undertaking at this time.

Air Cargo Transport Corporation has also financed the case of Hudson Airlines' applying for an air carrier certificate in the middle Atlantic Area Case before the Board. In the proceeding, officials of Air Cargo have testified that should Hudson receive the award they would resign and staff the new airline. In this event, Air Cargo would be left virtually an empty hulk. This fact was omitted in the original registration statement filed with the S. E. C.

▸**Expresso Issue**—Expresso-Aero Interamericano, S. A., was another company which originally received wide popular support. In May, 1945, 300,000 shares were publicly sold at $3.00 per share, the company receiving $2.50 per share. The issue attained a substantial premium immediately, selling above 10 in a matter of months. The current quotation is around $1.75.

New money was recently invested in the company when principals identified with Transair, Inc., purchased 175,000 shares. Further, equipment was transferred in exchange of $350,000 in convertible notes. This transaction may now permit Expresso to proceed with its plan of acquiring the 52 percent of Pan American Airways in Compania Cubana de Aviacion. Expresso is not strictly a nonscheduled operator as it holds a Cuban franchise. This pending acquisition would merely strengthen its position in that country.

The largest public sales among the nonscheduled lines have also encountered rough handling in recent weeks. National Skyways Freight Corporation, the Flying Tiger line, sold 500,000 shares of common stock at $5.00 per share in April, 1946. This issue never did attain a premium and continued to drop in price to $1.25 per share.

▸**Largest Project**—A similar experience was the lot of U. S. Airlines, Inc. This company's offering of 900,000 shares was poorly received in June, 1946. The total gross proceeds anticipated was $2,925,000 at $3.25 per share. This represented the largest projected underwriting of any nonscheduled company. The best bid price showing is now about $1.00.

Other nonscheduled carriers now available at discount prices include Flamingo Air Services, Inc. This company originally marketed 135,000 shares of common stock at $2.00 per share in April, 1946 and currently is around 50 cents.

Additional contrasts are afforded by the original offering prices and current bids respectively prevailing for the following companies. Airborne Cargo Corporation (formerly Hoosier Air Freight) $1.75-$1.00; Island Air Ferries, $3.00-$2.50; Latin American Airways, $3.00-$1.75, and Trans-Caribbean Air Cargo Corporation, $3.00-$1.25. The last named company was cited recently by the CAB in a show cause order as violating the scheduled air transportation provisions.

Companies which have gone into registration with the S. E. C. in May or June but who's securities have not yet been publicly offered are listed as follows along with the number of shares and projected unit selling price: Flying Freight, 300,000-$3.50, Great Circle Airways, 55,000-$5.00; International Airlines, 85,000-$3.00, Public Flyers, 200,000-$3.00.

Taylorcraft Future

Future of Taylorcraft Aviation Corp. lies in a report expected to be submitted within a few weeks to a federal district court by Cleveland attorneys H. A. Hauxhurst and Jerome N. Curtis who have been appointed trustees of the company by the court following Taylorcraft's petition to reorganize under Section 10 of the Bankruptcy Law.

Following an investigation of the company, the trustees may recommend appointment of a manager who would then run the plant and attempt to put the company in sound financial condition. An adverse report on the petition could be followed by dissolution.

Filing of the petition under Section 10 prevents any move on the part of stockholders or creditors to force the company into receivership or liquidation. If a manager is appointed, he will be responsible only to the court.

★ ★

ATA Meeting to Consider Grave Problems Facing Airlines

Thompson to ask for publicity policy shift to combat mounting criticism and foreign competition; budget cut likely.

By MERLIN MICKEL

Air Transport Association's directors and membership meet this week to lay plans for the first six months of 1947, a period many expect to be one of the most crucial faced by the carriers in their transition to a settled peacetime operation.

While the proposed budget for the half-year is said unofficially to run between $450,000 and $500,000—about the same as a year ago—the board is expected to scrutinize it even more carefully than usual for curtailment possibilities in the light of airline retrenchment plans. The directors have their regular meeting tomorrow (Dec 3) with the two-day annual meeting of the membership immediately following.

▸ **Plan Publicity Change**—Changes are in prospect in the Association's approach to publicity and advertising, one of the most important of the overall problems for discussion by both groups. John W. Thompson, who took over June 1 as vice-president-director of information, will outline a program for a realistic attitude in advertising and publicity fields (AVIATION NEWS, Oct 21), through which sales talk on air transportation will be left to the individual airlines while ATA information is based on overall policy, presumably to combat adverse criticism.

"We do not relinquish the natural advantages of air transportation," says Thompson's report. "The time and speed are still there, but we feel that our emphasis should be upon those points which create the most criticism, not those points upon which the majority agree as to our superiority.

"It is time for us to seek some expression of industry public relations and advertising policy. We are now in the midst of what may prove to be the most difficult period of our industrial career. The public is thinking of us no longer as purely a selling agency, but as a public service institution with large responsibilities."

▸ **Four Criticisms** — Four general facts, he said, influence ATA information policy: "1) The public is being indoctrinated with a disgust for airline service, 2) the employees and lower-case management of airlines themselves are beginning to take a pessimistic view of the situation, 3) the competitors—rails, steamships, buses—cannot be expected to disregard this opportunity to take advantage of the airlines' disgruntled customers, 4) foreign competition—foreign airlines—are moving in quietly but surely on this same wave of public disfavor for U. S. airlines."

Subjects Thompson would like to see emphasized through ATA's advertising and public relations programs include all-weather flying, air navigation-traffic control, improved passenger handling, cargo expansion, and airline operation of terminal facilities. He served notice that he was streamlining his department to do so.

Other prime matters on both board and membership agendas include multiple taxation and state and federal legislation. ATA will discuss its own version of a federal statute to eliminate "multiple and other unduly burdensome state and local taxation of air carriers." Other items to be considered on its federal legislative program: exclusive federal jurisdiction over interstate air carriers, air parcel post, legislation to make joint rates permissive rather than mandatory on through service with other forms of transportation, positive legislation action on steamship participation in air transport, provision for contract carrier regulation; the question of exemption of nonscheduled operators; regulation of security issues; international rates.

Additional subjects before the membership will cover reports on various ATA activities including air cargo, the integration problem, such international questions as a multilateral convention on commercial air rights, treaties, and activities of the Provisional International Civil Aviation Organization; and domestic questions of exclusive gasoline concessions at airports, industry participation in CAB nonscheduled proceedings, and payment for use of airway navigational aids.

ON THE NOSE:

The plastic nose on this cargo C-54 "St. Joseph" operated by American Airlines' contract air cargo division houses the first airborne radar in commercial operation. Navy and General Electric lent the equipment for commercial service tests (AVIATION NEWS, Nov. 18)

United Shows Profit For Third Quarter

With gains in operating revenues offset by increases in expenses, United Air Lines net earnings for the third quarter of 1946 were less than for the same period last year. The $1,592,571 net income this year amounted to 80 cents per share of outstanding common and management stock. Last year's third quarter net income was $1,508,155, or 92 cents per share.

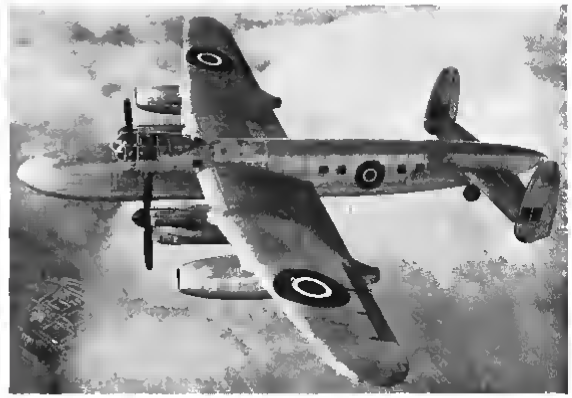
Operating revenues for the 1946 quarter were $20,272,534 while operating expenses and taxes, aside from income taxes, were $17,607,030. Comparative figures for the third quarter a year ago: $10,892,510 and $8,354,102.

The $2,343,631 net earnings for the first nine months of this year compared with $4,113,116 for the same period in 1945, or $1.21 per share against $2.48 per share. Operating revenues of $48,184,660 contrasted with $29,322,087 for this period a year ago, but operating expenses and taxes, aside from income taxes, were $43,599,080, compared with $22,486,635 for the first nine months of 1945.

Provision for federal and state income taxes this year was $1,777,000 for the nine months period and $1,031,000 for the third quarter. Last year the comparative figures were $2,908,000 and $1,073,000.

Other data for the third quarter of 1946 and the same period last year, respectively: revenue passenger miles, 344,809,463 and 166,269,283, revenue plane miles, 15,172,960 and 10,406,461; mail ton miles, 1,963,809 and 5,729,273 (reflecting loss of military airmail); express ton miles, 1,423,085 and 1,120,627. Air freight service started by United in February increased from 123,882 ton miles that month to 445,485 in September.

Passenger load factor for the first nine months of this year was 87 percent, a drop from the 95½ percent for the same period a year ago. Overall load factor—percent of total capacity actually used for passengers, mail and cargo—was down from 84 to 87.



FIRST JET TRANSPORT ON RECORD HOP:

The semi-jet Nene-Lancastrian, first airliner to use jet engines, as it flew from London to Paris recently in 30 min. under commercial schedule time. The craft cruised on the jets, as shown above. The reciprocating engines with propellers feathered are Rolls-Royce Merlins, the outboard jets are Rolls-Royce Nenes. (McGraw-Hill World News photo.)

Douglas Delivers DC-6 to Airlines

American and United each get one new transport for extensive service route tests.

Deliveries of Douglas DC-6s to the airlines began last week with one each to American and United, to be followed soon by another two apiece. Both companies said the new planes, larger than the familiar DC-4, will be ready for passenger service early next year.

Meanwhile, they bear NX licenses instead of the NCs they must have for commercial use. Douglas says they will undergo at least 60 days of rigorous proving flights over actual routes "under every conceivable operating condition."

▸ **Training Programs** — Both carriers announced they would launch immediately extensive pilot and personnel training programs. American expects that the pilot program it is starting at its Ardmore, Okla., training center will turn out ultimately at least 250 captains and as many first officers. Each trainee will receive about two weeks' instruction, including 5 to 10 hrs. aloft and 10 days' ground school.

American took delivery at Fort Worth, where the DC-6 was flown from Los Angeles in 3 hr. 50 min. Average speed was 314 mph. United's new plane was delivered at Cheyenne, where it will remain about three weeks before starting an operational and training flight over UAL's system.

▸ **United Orders 35**—United has ordered 35 of these aircraft, of which ten will be sleepers and 25 dayplanes. American has ordered 50 — about $30,000,000 including spare parts—of which 15 will be sleepers and 35 day planes.

In each case, the day plane will seat 58 passengers and carry 5,000 lb. of cargo. The sleeper planes will carry 52 persons sitting or 26 in berths, plus 5,000 lb. of cargo.

ELECTRONIC "HOT DOG":

United Air Lines stewardess, aided by a willing 6-yr.-old, demonstrates a new electronic sandwich vending machine at Chicago Municipal airport terminal. First of its kind in general use, the machine, which dispenses barbecued beef, hamburger and frankfurter sandwiches, was built by the Automatic Canteen Co. of America.

Pan American Denied Paris Stop by CAB

Pan American Airways' request to serve Paris in competition with TWA has been denied again by CAB. The Board refused to reconsider its opinion of June 14 and affirmed its belief that new evidence justifying a change in the North Atlantic route pattern is not yet available.

CAB refused to permit substitution of Rome for Naples as a temporary intermediate point on PAA's route to Turkey and India, but issued a temporary exemption enabling PAA to make traffic stops at Athens in addition to Naples.

Approve Airport Plan

Plans for improvement and development of facilities at Sky Harbor Airport, Phoenix, Ariz., were approved by the city's voters at a recent special election. The city plans to match the bond issue with federal funds.

TWA Accelerating Renewed Operations

Strike-bound airline flying all international schedules and more than half of domestic runs.

By BLAINE STUBBLEFIELD

TWA had 52 of its total 94 domestic and all 22 international schedules back in operation last week following the 26-day pilot strike which ended Nov. 15.

Domestic trips were loaded at the pre-strike 80-90 percent factor, after a light beginning due to advance bookings on other lines while TWA was grounded. Trans-Atlantic eastbound flights were light, but incoming ships were full.

▸**Coal Strike Factor**—The coal strike is curtailing rail passenger capacity and all the airlines may be jammed with the overflow, which will help TWA to get going. At press time the Office of Defense Transportation had not called on Air Transport Association for special assistance, as it did during the rail strike, but ATA spokesmen said they expected it if the coal miners stay out long.

Hearings by the three-man arbitration board, whose decision will be accepted as final on 4-engine pay and working conditions, by both TWA and the Air Line Pilots Association, will open Dec. 18 in Chicago. Award is due in 10 days after 11 or 12 days of board procedure.

All TWA pilots, now totaled at 1,100 after widely varying tallies, are back on the pay roll. Management still contemplates discharge of 350 who were in training to fly Skymasters and Constellations previously on order but canceled during the strike.

▸**Continue Program** — TWA spokesmen still insist they cannot reinstate the orders, and add that Constellations previously allocated to the company have been transferred to other purchasers, including Pan American and Peruvian Airlines.

Company denies it has any intention of dropping its Constellation program, in which it has invested about $40,000,000, and says it likes the plane. Pilot complaints refer only to inconveniences and noise in the cockpit, not to flight characteristics.

TWA ground personnel are being called back as schedules are reinstated. Company will not know how many have quit until full operation is attained. However, quits may just about balance the airline's current nationwide personnel cutback.

National Mediation Board, which umpired negotiations ending the strike, said consideration of ALPA's two-engine pay demands on American Airlines were resumed last week. Two-engine pay on TWA also is due for re-negotiation between management and pilots union.

Vital Questions

Of the 14 questions to be answered by arbitration in the TWA pilot pay dispute, the first six call for base, hourly, and mileage rates on Skymasters and Constellations for first pilots and co-pilots on domestic and international runs.

Other questions:

7) Shall monthly minimum rates be established on international service? If so, what rates?

8) What additional compensation shall be paid co-pilots on international runs who qualify as navigators?

9) How much compensation shall be paid pilots in training for international service?

10) What shall be the rules in overseas service for trip and moving expense; insurance, workman's compensation, sickness, injury, and other benefits, and vacations?

11) Shall overseas flight time be limited? If so, what shall it be, provided federal law is not violated?

12) What, if any, shall be the change in oversea route bidding procedure?

13) How shall pilot oversea assignment grievances arising from interpretation of agreements on rates of pay and rules, be settled?

14) When shall awarded rates of pay begin?

Single Carrier Service Vital to Competition

Single-carrier air service between U. S. traffic-generating centers and foreign areas must be established if the airlines are not to lose a considerable portion of their war-captured business to surface transportation, according to R. C. Lounsbury, assistant general traffic manager of Pan American Airways.

Testifying at the Atlantic City hearing on PAA's application for domestic trunk routes, Lounsbury said the connecting schedules of domestic carriers are not now planned to give smooth service to the air traveler bound overseas. He declared that under Pan American's program domestic and overseas operations would be integrated and one-plane service frequently would be available.

Lounsbury asserted that inconveniences presently suffered by passengers going overseas are hurting air travel. Already, he said, we are witnessing diversion of thousands to steamships.

Certification of long-haul domestic routes requested by Pan American would provide the American public with mail service equal in many ways to telegraphic service, according to Lounsbury. He added that unless the PAA plan is approved foreign airlines in some cases would have the best schedules for carrying mail through the U. S. to overseas points thus depriving American carriers of revenue.

Southwest Feeder Line To Begin with DC-3s

After nearly a month's delay, Southwest Airways Co. expected to inaugurate its feeder service today (Dec. 2) between Los Angeles and San Francisco, on what will be its southern division. Plans call for opening of service over inland and coast routes between San Francisco and Medford, Ore., early next year.

Within weather limitations Southwest will operate low-level contact service, attempting to limit to 5 min. the ground time of its DC-3s at any one airport. Fares follow closely those of trunk carriers, ranging from $2.50 for such short hauls as San Francisco-Vallejo to $29.40, exclusive of federal tax, between Los Angeles and Medford, route terminals.

Stringer Leaves AAA

Harry R. Stringer's resignation from All American Aviation, Inc., was announced last week by the Air Pickup Company, with which he had been associated since March, 1939. Stringer was vice-president in charge of traffic, mail, advertising and public relations. A widely-known figure in the industry, he is chairman of ATA's airmail committee. He organized the Feeder Airlines Association and was its first president. He was first chairman of ATA's Air Cargo Conference, and is former chairman of the traffic committee-air express.

WORK STARTS ON NEW UAL BASE:

Drawing shows how United Air Lines' new maintenance base, for which ground was broken recently at San Francisco, will look when completed next fall. Plans call for eventual servicing of the carrier's entire fleet at the new base, including that now done at Cheyenne. The new two-story steel and concrete building will be 480 x 260 ft.

Short "Plymouths" To Replace Boeing 314s

Three Boeing 314 flying boats used by British Overseas Airways Corp. on its thrice-weekly flights between Baltimore and Bermuda are to be replaced early next spring by three new British-made Short-Sunderland "Plymouth" flying boats.

The new planes will cruise a little over 200 mph., faster than the Boeings, though theirs will accommodate 30 to 35 passengers instead of the latter's 60 to 65.

Announcement in London that the service would be continued indicated approval of a 3-yr. lease of the marine terminal at Baltimore Municipal Airport which the city administration has been negotiating with BOAC. Present lease expires Dec. 31.

A BOAC spokesman predicted that the Baltimore-Bermuda flights would be increased to daily round-trips soon after the new planes enter service.

Cheyenne Gets Center

Cheyenne, Wyo., has acquired a modification center built there by the government during the war for $4,212,424 and is expected to lease all or most of the facilities to United Air Lines on a long-time basis. UAL employees have banded together to build 200 homes just north of Cheyenne under the veterans' housing program, at a cost ranging from $8,000 to $10,000 apiece.

CAB SCHEDULE

Dec. 2. Hearing on airfreight case of Washington, D. C. (Docket 310 et al.)
Dec. 2. Oral argument on route consolidation applications of Eastern Air Lines and Delta Air Lines. (Dockets 1471 and 2284.)
Dec. 9. Hearing on investigation of Airlines Negotiating Conference agreements. (Docket 2093.)
Dec. 16. Hearing in Pan American Airways' Atlantic rate case. (Docket 1794.)
Dec. 18. Hearing on foreign air carrier route application of Far Eastern Air Transport. (Docket 2479.)
Dec. 18. Oral argument on route consolidation applications of Braniff and Chicago & Southern. Postponed from Dec. 2. (Docket 1154 et al.)
Dec. 18. Oral argument on PAA-Panagra through flight agreement. (Docket 2423.)
Dec. 20. Exchange of exhibits in case involving additional Florida area service. (Docket 997 et al.)
Dec. 20. Exchange of exhibits in freight forwarder case. Postponed from Nov. 18. (Docket 681 et al.)
Jan. 1. Exchange of exhibits in Caribbean-Atlantic Airlines' application for foreign routes. (Docket 2246.)
Jan. 16. Oral argument in Cincinnati-New York route case. Postponed from Dec. 9. (Docket 221 et al.)
Jan. 2d. Hearing on Caribbean Atlantic Airlines' application for foreign routes. (Docket 2246.)
Jan. 20. Hearing in case involving additional Florida area service. (Docket 997 et al.)
Feb. 17. Hearing in freight forwarder case. Postponed from Jan. 20. (Docket 681 et al.)

CAB ACTION

The Civil Aeronautics Board:
- Permitted American Overseas Airlines to inaugurate nonstop service between Shannon, Eire and Frankfurt, Germany.
- Denied motion of Chesapeake Airways to reopen record in Middle Atlantic area case (Docket 674 et al.).
- Dismissed Chicago and Southern Air Lines' application for temporary exemption authorizing service to Hot Springs, Ark., as an intermediate point on AM 53.
- Denied Eastern Air Lines' petition asking permission to operate nonstop between Chicago and Miami beginning Nov. 1.
- Reinstated certificate application of Keeshin Air Freight, Inc. (Docket 918).
- Permitted Eastern Air Lines to intervene in TWA-Delta equipment interchange case (Docket 2346).
- Permitted Southwest Airways Co. to serve Los Angeles through Lockheed Air Terminal on AM 76.
- Denied West Central Airlines petition that action be deferred on its application (Docket 1534) in Texas-Oklahoma case (Docket 337 et al.) until the Board can decide on carrier's application (Docket 1424) heard in Mississippi Valley case (Docket 448 et al.).
- Ordered United Air Lines to show cause why use of Gooding Municipal Airport for service to Twin Falls, Ida., should not be disapproved.
- Permitted Orlando Airlines to suspend service temporarily at Live Oak, Fla., on AM 75 and authorized Southwest Airways Co. to suspend service temporarily at San Jose, Cal., on AM 76.

More 202 Orders

Orders for four Martin 202 airliners have been received by the Glenn L. Martin Co., Baltimore, from Linea Aerea Nacional of Chile. LAN, government-owned carrier, was organized in 1932 to take over commercial air services of the Chilean Air Force.

LAI Plans Service

Linee Aeree Italiane, Italian carrier in which TWA has a 40 percent interest, expects to begin operations this month with C-47 service between Rome, Milan and Turin.

NATA Leaders Need Support

Although many other thorny problems remain unsolved, National Aviation Trades Association has taken an important step forward in its election of Beverly Howard as president. Fortunately for the Association, Mr. Howard has agreed to accept the post. He does so realizing that NATA will demand both personal time and expense which could and would otherwise be devoted to his own well-known organization, Hawthorne Flying Service.

Most members of NATA have never realized or appeared to be concerned with the problems and personal sacrifices their officers have been compelled to assume. It is time they do realize it. The new president and the entire list of officers elected at the Cleveland reorganization meeting represent the most progressive and businesslike elements in the nation's fixed base operators.

There is a heavy responsibility on the membership. They must not revert again to petty politics and feuds. They have the leadership to make NATA work. If they fail to realize the need for a strong, united national association of fixed base operators, NATA will be washed up, and a lot of operators may be too.

Welcome to Congressional Pilots

Aviation can cheer at news that a group of congressmen, all pilots, have formed the Congressional Pilots Association "to make the 80th Congress air-minded." To prevent this movement from dribbling off into insignificance, as did the once well-publicized Congressional Flying Club, aviation should be quick to encourage these pilots, led by the Republican representative from New York, Henry J. Latham. Others in the organization meeting were Clair Engle, California Democrat; J. Harry McGregor, Ohio Republican, and J. Leroy Johnson, California Republican.

Mr. Latham told a press conference their plans include taking every congressman and his staff on flights and a training program designed to make more private congressional pilots out of all those willing to take instruction.

"America's future," Mr. Latham said, "is linked with the future of aviation, and if we can lift a goodly number of members of Congress out of the armchair flyers' category, then we won't have to worry about the future of aviation—or America."

If ever there was news of importance to aviation, this is it. We hope the airlines, the manufacturers, our fixed base operations groups, and all segments of industrial aviation will be quick to offer every encouragement. AVIATION NEWS offers hearty congratulations and a welcome to the new association, and we hope the aviation industry does too—by mail, telegram, and personal visit.

A New High in Reader Interest

Several times on this page we have expressed appreciation to the readers of AVIATION NEWS for their generous response to our editorial questionnaires. We do so again.

Each month since August, 1943, when the NEWS was established, several hundred readers have been selected and asked to comment frankly on their reactions to the magazine. The selections were planned so as to reach each subscriber once a year. The percentage of readers who have taken the time to fill out these questionnaires and return them to the editors exceeded expectations from the beginning. The rate of return has increased steadily.

The latest report, however, is astonishing. Of 913 questionnaires mailed, 445 were returned, representing a percentage of 48.7. This is an amazing response for any mail questionnaire. The editors of the NEWS again express our appreciation for this interest on the part of readers.

As a result of this effective readership poll it has been possible for the editors to make continual improvement in the publication and the editors again devote this space to a few words of thanks.

ROBERT H. WOOD

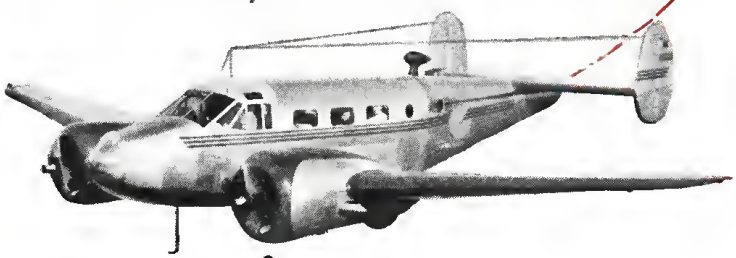
How to get your goods on the market

. . . in a COMFORTABLE hurry!

Two men and a handful of assistants traveling in a company-owned executive transport plane once established 40 distributorships coast-to-coast for a now nationally-known beverage in only 40 days! They flew from point to point, wasted not an hour, spent plenty of time with each distributor —and traveled in luxurious ease without a moment's fatigue. The cost? Decidedly less, all told, than ordinary surface transportation would have cost them. But most important—they put a product on the market months ahead of competition and won national recognition for it almost overnight.

The new Beechcraft Model 18 company transport can lend the same efficiency and economy to your operations; for inter-plant travel, sales conferences, customer service and every other business function requiring quick, time-saving transportation. This plane—in daily use by hundreds of corporations—is a twin-engine, 200-mile-an-hour transport, seating up to nine persons. It is luxuriously comfortable, tastefully appointed—and its high efficiency means high economy. It is, we believe, one of the most important "business machines" ever made available to American industry.

We are prepared with facts and figures to help you appraise company-owned air transportation in the light of your own transportation needs. We welcome the opportunity to demonstrate to you the new Beechcraft Model 18. No obligation, of course. Our distributors are located in key cities across the U.S.A. Beech Aircraft Corporation, Wichita, Kansas, U.S.A.



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